1949

The Design and Execution of a Mural

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THE DESIGN AND EXECUTION

OF A MURAL

By
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A.B. Oberlin College, 1947

A thesis submitted to the Faculty of Oberlin College
in partial fulfillment of the requirements
for the Degree of Master of Arts
in the Department of Fine Arts

1949

PREFACE

After completing the mural discussed in this paper, which was to me the major problem, I approached the writing of these comments upon it as an anticlimax. I find verbalization of my work difficult; the special province of an art form is that which goes beyond statement in words. However, there is much to be said for the importance of verbal interpretation. Those who produce in the art field today should be able to express the things which they learn from the world about them not only in paint or stone, but as far as possible in words. I have found it valuable to verbalize the manner in which a created object may take shape and to indicate the sources which I used in its development. These considerations may prove of interest to the general public.

The student who undertakes a comprehensive problem such as a mural requires intelligent guidance. I would like to thank Mr. Richard J. Miller who worked with me, whose ability to present fundamental principles gave me a basis on which to build my own observations. I appreciate also the aid of Miss Ellen Johnson, Mr. Ransom Patrick, and Mr. Clarence Ward, who made it possible for me to undertake this project, and whose interest in its progression has been very helpful. Of no little importance during the painting of the mural was the cooperation of

Miss Eleanor Stevens, children's librarian. Mr. Arthur Princehorn, Mr. James Scott, and Mr. Andrew Stofan deserve special credit for their excellent photography.

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INTRODUCTION

The whole purpose of this paper is that of viewing the creative process as precisely as possible. However, it may be wise to make a few remarks which touch upon the more general nature of the mental and emotional process of creativity to the extent that I have been able to generalize from my experience in plastic organization.

Being surrounded by the natural world, men form opinions about it and seek meanings in it. The creative person is ultimately concerned with a possible unity which he feels in every phase of study, historical, biological, and others. This goal which creative men have set up in various forms throughout history in order to make their activity real and important is derived from the processes of nature. Nature creates many varied organisms: those which function satisfactorily and adapt to environment live, those which do not adapt die. Man sees the survival of organisms whose form follows adaptive function as meaningful. The artist in any field is particularly concerned with healthy forms whose adaptation exhibits the value of life to him, in that the complex yet simple organization which permits them to live seems no less than miraculously contrived by a unifying and purposeful power.

Man, as part of the natural world and yet able to mold it to a degree, must adapt in highly complex ways to problems of environment, both natural and social. He has found that he accomplishes this adaptation best by learning how healthy natural forms around him operate and by applying their principles of structure and organization. These principles of the law of adaptation, when grasped by man with intuition and understanding reinforced by the logical systems which he constructs from his experience, can produce for him honestly useful objects and institutions. And these become for him something higher than natural forms. Further, it is necessary in a democratic view of man that he have the responsibility of making vital and living for other people the passive materials with which he works. A statement from Louis Sullivan's Kindergarten Chats[1] expresses very aptly in terms of the architect the social function of any productive person: "...to vitalize building materials, to animate them collectively with a thought, a state of feeling, to charge them with a subjective significance and value, to make them a visible part of the genuine social fabric, to infuse into them the true life of the people, as the eye of the poet, looking below the surface of life, sees the best that is in the people -- such is the real function of an architect."

[1]Sullivan, Louis, Kindergarten Chats, page 140

I am led to the conclusion that in addition to their material efficiency, well made objects or institutions function in the realm of the spirit as symbols of man's relationship to all other life by functioning in obedience to principles common to every natural form. These objects say in concrete terms that life has an organization which can serve man and point the way to his attempt at completeness.

The consideration of one of these objects, a mural, may bring before us the manner in which the principles of natural organization can aid in an honest approach to the problem of production. In what ways can a wall painting function? Is it superfluous ornament or does it fill some need? The mural is part of a building, and therefore must be judged in the light of the manner in which it is the logical embodiment of the building's function. I believe that far from being a luxury, the ornament of a building will be a high expression of man's logical and romantic nature, if conceived as a part of the organic growth of the building, even as the fruit partakes of the identity of the tree.

We may return to Sullivan's statement here and read it more particularly as speaking of a building, in this case a decorated one. Of course, the building is made, basically, to supply some social demand; it is to be used, and therefore must be soundly designed for efficiency.

But beyond this is an addition of a quality, imparting to building materials the vitality and significance which will illustrate "the best that is in the people."[1] A mural can contribute to this animation and value. In the past, wall paintings have made the prevailing myth more believable by depicting this creed in a visually logical manner and in forms familiar to the observer. Whatever creed is depicted, a painting whose forms show a promise of function in their relationships to each other, to the forms of the room, and ultimately the whole building, will present its own powerful myth, that of the presence of organization in life. The myth produced by art forms can be universally read by all those sensitive to the structure and organization around them wherever they may be, or whatever particular language they may speak.

Less generally, in order to function as part of a building and of a room in the building, a mural must reinforce and respect their structure, and their kind of organization. First, the spirit of the forms in the room must be echoed in the feeling of the mural, for the ensemble is tuned to the human activities performed there. Ideally, the painter will have watched the growth of the building and will understand the architect, and they will both have learned from nature the principles of scale and

[1] Ibid, page 140

proportion and of detail developing from mass. Second, the structural organization of the forms in the mural must make even more logical to the eye the three dimensional structural organization of the building. As Henri Focillon says, "the logic of the eye, with its need for balance and symmetry, is not necessarily in agreement with the logic of structure..."[1] This is discussed later in this paper in regard to such forms in architecture as the tympani of a Gothic cathedral. These bear little structural stress and by the logic of structure need be merely screens above a small lintel, but by the logic of vision they span open doorways and should be treated as strong forms. The organization of a tonal pattern on the wall which fills the needs set up by the architectural organization of the room will be discussed fully in reference to my own mural problem.

A third consideration for the muralist is the problem of scale. The forms which he uses must be logically proportioned in relation to the occupants of the room and to the architectural forms surrounding the mural. He is guided here by a sensitivity to the scale of natural forms. The muralist must also work with the light at his disposal, using it to its best advantage so that his painting may be seen and enjoyed.

[1]Focillon, Henri, The Life of Forms in Art, New York: Wittenborn, Schultz, Inc., 1948, page 9.

All of the above problems demand that the mural be painted in situ, so that they may be worked with as they arise throughout the entire production. These and other problems concerned with technique, etc., will be covered in the body of the thesis concerning the mural in the Oberlin Library.

Nature manifests herself in ways which are useful to the creator of any new form. We see necessity for organization, although we find no formula, because nature's principles take endlessly varied forms. We see that nature uses materials in many different ways, depending on the function to be performed. When we attempt to reproduce in one material the surface aspects of another we violate her laws. A horse painted on a wall is not a real horse and serves a different function, and the attempt at surface copying is futile. The horse on the wall, produced in new materials, can be made to exhibit the promise of function if these materials are used with a knowledge of that organization and structure in a real horse, or any natural form, which produces actual function. The promise of performance in art constitutes an aspect of that nebulous thing called Beauty.

We see also that nature subordinates detail to mass, mass to whole.[1] We see objects in nature as a whole by

[1]Greenough, Horatio, Form and Function, University of California Press, 1947, page 58

virtue of their tonal relationships to each other, and we see that healthy objects in nature have a rightness of scale and proportion for the function they are to perform so that they appear ample and strong. We see the presence of metamorphosis in nature, the suggestion of future mature forms in those newly born, and the gradual logical development and environmental adaptation of these forms. We see that the final form of a tree is not preconceived, though the future forms are suggested in the seed. No one can predict the final form of the tree from observing the seed, for it depends upon the soil, the climate, the surrounding trees and many other variables existing during its development. Neither can one predict the final form of a painting from a sketch, least of all would the artist attempt to do so.

Although final forms are not preconceived in the mind of the artist and his mental processes are continually in flux, they are highly organized. Ideas in the creative mind are organized in a special order of relationships (unlike dreams and recollections) and emerge in a new dimension. The artist's ideas are form; he thinks and feels in forms. As the composer hears the design of his music not in a written score, but in timbres and instruments, so the artist sees not a compositional graph of his future painting but tones, modelling, and touch.[1]

[1]Focillon, Henri, op. cit., page 46

It is seldom disputed that an artist is concerned with selection toward organization. But any artist is under a discipline and a certain limitation to the extent that his work must exhibit "some reference to the qualities and structure of things in environment."[1] The act of expression becomes more than a direct discharge of emotion to the extent that it is restrained and informed with material that is gathered from a broad basis of experience. More particularly, discipline is involved also in solving a problem dependent upon certain demands inherent in its situation (like that of a mural). It is a more concrete lesson in organization than that contained in a problem such as an easel painting. The limitations, if they can be called such, set up by the architectural forms and the uses of the building, do not actually limit freedom of expression. As will be seen throughout the description of the mural under discussion, the limitations imposed by surrounding forms and by subject matter in the painting itself, provide stimuli for a broad range of solutions. Lacking these kinds of stimuli, the mind most often turns to repeating itself; it has too much freedom.

The process of growth in a created object is an organic connection between the experience which makes up the mental forms and the objective material with which

[1] Dewey, John, Art As Experience, page 95

the artist works. He expends his whole powers, intellectual and emotional, upon his new production, and this evolving form begins to make evident its own requirements from the first. As the material with which he works is formed by his ideas, he sees in its metamorphoses new directions. The artist's ideas are acted upon by the developing object. Thus there occurs the highest kind of an integration between the artist and his materials, all forms concerned undergoing change toward the production of a new entity.

In discussing both the universal and more particular aspects of the creative process, we have seen that nature is the source of art. In her processes men discover principles which they project into new forms by their yearning for perfect adaptation. They thus gain a clearer insight into the profound rhythms of nature, and by their ability to mold natural forces, produce forms which become new entities. These forms are possessed of the essence of man related to nature, and have a continuous life of their own.

CHAPTER I

THE MURAL DESIGN

Such a major project as the master's thesis, I believe, should be closely allied to the present development and future active production of the individual who undertakes it, while at the same time being useful to other persons. I feel most fortunate at having been engaged in such a problem. Early in 1948, the redecoration plans being made for the Oberlin Public Library Boys' and Girls' Room offered an opportunity for the use of a large mural, and its execution was assigned to me.

The general problem was that of giving this room the vitality which one associates with children in the attempt to make it as attractive as possible for their use. Since the color scheme of the room could be considerably more lively than that used for an adult reading or study room, a dominant use of clear bright color could compensate for the heavy impression of the architecture. Those concerned with the redecoration[1], Miss Eleanor Stevens, Mr. Lester Ries, Mr. Julian Fowler and I, decided upon a color scheme for the room which used light yellow on the walls, light blue on the bookcases and woodwork, and dark blue-green on the bookcase lining and in the curtains. The dark furniture was rejuvenated with a light natural finish.

[1]Miss Stevens, librarian of the children's room; Mr. Ries, superintendent of Oberlin College Buildings and Grounds; and Mr. Fowler, head librarian of the Oberlin Library.

The first questions to be considered in composing the mural were those concerning its position in the room, the subject matter to be used, and in general the desired effect in keeping with the activities of the room. The largest blank wall space was also in a position to be seen immediately upon entering the doorway, and thus could well be used as a decorative area. The room was large enough and gave such a heavy impression in the scale of its parts that two murals, on each side of the room in its two largest wall spaces, would not have been amiss. However, because of lack of time, the larger of the two areas (the 6½'x17' area opposite the doorway) was chosen as the space to be decorated.

The subject matter presented certain problems involved with the age range of the children who used the room, that range being from pre-kindergarten to high school ages. In consultation with Miss Stevens, librarian, it was decided that well known fairy stories would be the most logical solution. Those children who were too young to appreciate the story were apt to enjoy the animals, flowers, and characters themselves, and the general bright effect of the color. It was felt that the older children would not be beyond the enjoyment of such universally loved stories, and their interest could be expected to concern as well the technical and compositional aspects of the mural.[1]

[1] See appendix

The general vivacious spirit desired of the mural presented a difficult problem. The function of the painting was to lighten the somber feeling of the heavy-handed architecture in order to make the room a pleasant place for children, and at the same time to compose well with this architecture. An unsuccessful solution may be seen in sketch #1 (plate 1), an early experiment ignorant of the possible ways of treating a flat surface and the importance played by tonal relationships in creating a structural organization which would be architectural, so to speak, and seem to support itself.

This particular wall was unsuited for a generally flat treatment. The scale of the architectural forms was such that this treatment would give the feeling of inadequacy and present a thin, papery surface which would fall so far short of working with the architecture that its lightness would seem wasted and out of place. In order to corroborate this theory, a thorough investigation was made of the historic treatment of similar rather massive walls, such as are found in Italy during the Renaissance. These studies will be discussed in detail later. The proper solution seemed to be a controlled undulation of the wall, much in the manner of a low relief, with the forms in the painting modelled so that they took on considerable three-dimensional structure. However, the wall would be sufficiently maintained because the edges of the forms would be kept definite to prevent the impression of a completely sur-

rounding space.

A rough perspective sketch was made of the room, noting the lights and darks in particular, so that the tonal areas in the mural space could be related to the tones in the room (sketch #2, plate 2). It was decided that the difficulty of composing as many characters as are indicated on the first sketch need not be faced, because the children would be better able to distinguish and enjoy fewer and larger characters. The difficulty mentioned above is that of composing forms of sufficient scale for the room, which would in this case necessitate combining many small forms into one. Three of the six story groups previously shown were chosen. Cinderella, Sleeping Beauty, and Jack and the Beanstalk were considered to be widely enjoyed, and these stories suggested to me many possibilities in the use of varied forms. Those of Cinderella's mice, horses, and fairy, and Jack's beanstalk opened a limitless field for a choice of shapes and patterns. The advocates of "free form" can hardly claim subject matter to be a limitation, I feel, when with a certain subject as a departure point so many varied ideas present themselves for experimentation.

Three early sketches are illustrated in plate 3. They show experimentation with possible positions for the story groups and possible tonal constructions. Ideas for just what figures and objects to use develop simultaneously as

the tonal structure develops, each influencing the other. This interlacing suggestion process goes on continually from this time, subject matter giving ideas for shapes, patterns, tonal relationships, and inversely, formal relationships suggesting changes in position of characters and introduction of new objects. These sketches are cloudy and destructive to the wall surface and also avoid definition of form. They were composed with a hazy idea of the need for a structural span of some sort across this long space, but were not successful. The fact that there are bookcases below the mural area demands a particularly structural mural arrangement, since the effect of the lower wall is one of badly broken tone which provides no visual support for the space above. Consequently, this upper space, when made mobile by the tonal pattern of the painting, must give the appearance of an organized structure which is self-supporting. One solution which was chosen later (plate 20) for this problem was that of employing a light tone across the entire base of the mural space, giving a lintel effect. At this point in the composing process, reference was made to solutions for structural problems made by good painters, and even sculptors, for their treatment of wall spaces is often concerned with similar problems. The west portal of Chartres (plate 4) shows an inspired and logical treatment of visually unsupported areas, the tympani. This photograph gives evidence that even from a considerable distance the

structure of the entire portal would be emphasized and made more visually logical by the handling of its sculpture. The tympani are areas receiving no strains from the surrounding structures, but should, because they are above doorways, be made to appear strong to supply the "logic of the eye".[1] All three tympani use the effect of cross beams as strong spanning members, not only emphasizing the actual lintels, which hold up the semi-circular stone above, but also carving that stone in the manner of additional lintels. The rows of disciples, the hovering angels, the nativity and presentation groups, read as very strong lintels. They are subtly treated, however, with the use of sparkling transition tones along their edges provided by the angels' clouds, the disciples' arcades, etc. The horizontal effect is also strong in the upper portion of the central tympanum. The darks which occur below the lion, in the lower tip of the mandorla (strengthening this unstable shape), and below the bull, read forcefully. Moreover, the pattern of forms in the evangelists' symbols firmly buttresses the mandorla.

Turning to mural painting, we can see another arrangement for logical visual structure. The two views of the Arena Chapel at Padua (plates 5 and 6) proved very instructive to me. Giotto has lightened this rather heavy barrell vault in many ways. Along the side walls, he has placed the top row of panels so as to give the impression of a higher more graceful springing for the arch of the ceiling.

[1] Focillon, Henri, op. cit., page 9.

In plate 5, the arch of triumph is given more grace by the placement of the small panel of Christ enthroned, which corresponds in tone to the two representing the annunciation. This panel extends only half-way to the top of the apse opening, and when the eye relates it with the annunciation panels, the effect of a lighter archway is given. The entrance wall (plate 6) depicting the last judgment was more particularly helpful to me in the solid structural massing of tonal areas. Christ's mandorla is again held by massed light tones, and groups of angels form buttressing tones against the window openings above. The horizontal massing of figure groups gives a firm structural feeling to the wall, which is, however, beautifully arranged in exciting assymetrical shapes.

I had reached the realization of the need for some structural support across the seventeen foot span of my mural space. The use of a rough arch form was strongly suggested by the possibilities of the early sketches, and I attempted to work with this idea without being too obvious in its solution. The Giotto Last Judgment was a good lesson in subtle composition of large structural forms, and early Buddhist wall paintings and screens provided further sources of instruction. Plate 7 illustrates a Japanese Buddhist screen painting which uses similar elements on each side of the central Buddha, but arranges them with a vivacious sense of life.

Sketch #6 (plate 8) marks the real beginning of the basic compositional idea, though it remains undefined and soft. I had gained a clearer conception of the use of tonal organization for structure by studying the work discussed above, but discovered that intellectual understanding of an idea is quite different from employing it productively. I was still using lights and darks in a hit or miss method. Examples of nature's tonal organization proved most helpful. For instance, if the hand is extended until the light falls across it, the tendons going through the back of the hand and the bones of the fingers and wrist are revealed in their structure by the light turning over their planes. At the points where bony structure is closest to the surface, where the planes turn, there is a juxtaposition of a light and dark tone which shows precisely the way in which the bone or tendon is constructed. There is no arbitrary tone, every one shows structure. If this kind of logical organization can be employed in the composition of a painting, it will give a reason for being to the new object, by causing it to express in this way the logic of natural functioning.

Sketch #7 (plate 9) shows a wider tonal range achieved by the use of a conté crayon rather than a pencil. In general, a freer use of tone results from a drawing medium which produces deep non-shiny blacks. The subtlety of the pencil tone range requires greater sophistication in handling. This sketch indicates an attempt at definition of the forms

to be used, with the realization that until some commitment in this direction was made, the sketches would remain full of possibilities but never reach actualities. Persian miniatures were helpful sources at this stage. Even though their treatment is more that of a flat pattern than could be employed in my problem, their lesson in beautiful shapes and in logic of tonal organization was very powerful. The type of print illustrated (plate 10) was instructive not only in its definite forms and rich drawing, but as an example of background treatment. Numerous little flower forms serve to give a general tone to a whole area, while preserving a great deal of sparkle because of the many lights and darks of which it is composed.

The commitment which must be made toward definition of form is a difficult one, since this makes very evident the beginner's small vocabulary of form. A continual need for knowledge of the construction of all kinds of form, human, animal, and vegetable, is felt. Sketches from life must be made from the first moment that the general position of the forms is suggested, since these sketches, if produced with the right kind of observation, will make available to the painter not only a particular logical articulation of one figure, but a few more words in the language of tone and shape.

It was felt at the beginning that freedom in the total shape of the mural, that is, non-confinement to the rectangle of the wall space, would give more vivacity to the mural as

a whole. Witness the lively spirit of the Japanese painting mentioned above, whose outside shape is free and at the same time beautifully controlled and strong. In sketch #7 (plate 9), an effort was made to keep the outline organized into unified masses so that it would appear strong and not capricious. Another architectural element was noted as having some bearing on the composition, that of the beam above the mural indicated in the sketch. This suggested the probable need for a supporting form beneath, which is obtained by a general pyramiding of shapes and tonal areas.

Several more sketches not illustrated were made, which showed no real development. These periods in which the creative process lay fallow were frequent and discouraging. Sometimes when the mind "loses willingly all sense of form"[1], desperate experiments or accidents in drawing point the way to a new direction, but these sketches were only the result of a relaxation period in preparation for some new impetus.

Sketch #7 was reconsidered as having some potentialities, though the compositional grouping in the lower center was felt to be too static and the lines of the chair backs difficult to use successfully. Suggestions for possible poses are noted at the bottom of the sketch.

The investigation of tonal organization in the work of other painters led at this point to Giotto, and a sketch was made of tonal areas in the Wedding Feast (plate 11),

[1]Focillon, Henri, op. cit., page 44.

noting the broad treatment of tone. The four women in black to the left are united as one form by this broad dark tone. A medium tone unifies the two central figures, and two are again combined in the adjacent dark tone to the right. This sort of tonal use helps to produce the statuesque relief quality and monumentality so strong in Giotto's work.

The eighth sketch (plate 12) witnessed a rather interesting phenomenon. Its advance toward ampleness and healthiness of form is the result of a constant reference to the work of such painters as Paolo Uccello, Andrea del Castagno, and Piero della Francesca during the sketching process. This procedure was a conscious attempt to feel in the work of forceful artists the monumentality of drawing gained by their real understanding of organic structural organization. The reference was never to specific figures or poses seen in any of these masters' works, but simply to the quality of the drawing. As my drawing was felt to become especially weak, new reference was made to the reproductions of their murals, and the change in the sketch forms was tangibly felt. The best source for observing the quality of ampleness is, of course, in natural objects. It is to the art student's advantage to conceptualize and develop as early as possible the observation of this quality of any natural form, no matter what its physical size. A healthy form in nature will never appear to be anything but ample for its function. This sort of observation is the basis for a

study of scale and proportion to be utilized by the artist in the making of any new form.

A brief notation was made at the bottom of sketch #8 from Francesca's"Queen of Sheba"(plate 13), observing its tonal organization. As can be seen in the illustration, the pattern of this mural is arranged brilliantly, utilizing the subject shapes where advantageous, the important consideration being the tonal construction of the wall. This same free and beautiful use of tonal pattern, which can hardly be considered in a much different light from modern cubist painting, is illustrated in the detail of Uccello's "Rout of San Romano"(plate 14).

The ninth sketch (plate 15) indicates an attempt to organize in tone. It is unsuccessful in that its tonal shapes are meaningless. Further definition is needed in order to eliminate the amoeba-like shapes. A shape acquires meaning when it results from necessary structures which surround it, as can be seen in Romanesque murals, for example, where the spaces between the figures have as much quality as do the spaces between the branches of a tree. (Compare plates 16 and 17).

Sketch #10 (plate 18) shows the first time the entire wall is indicated in the drawing itself, and the suggestions for tonal arrangement given thereby were so helpful that I saw clearly the advisability of having done this from the very beginning. When the total organization of the room is

as important as in the case of a mural, the device of including its complete tonal set-up on every sketch prevents many wrong turns and much wasted time. The mind automatically considers and draws suggestions for scale and structure from surrounding shapes and tones when composing the enclosed area.

The tenth sketch is very indefinite, but produced many ideas which were more fully developed in the following two drawings. Sketch #11 (plate 19) is a quick notation of these ideas. The basic compositional structure becomes more clarified from this point on and enough ideas have been gathered now so that the process of producing becomes a great deal more enjoyable than before.

Wrapping paper large enough to include the whole side of the room at a scale of one inch to one foot was used for the last three sketches. The amount of time spent in drawing the room layout on each sketch is small compared to its usefulness, for these last sketches were developed for two or three weeks each, until the paper would bear no more erasing. The compositional idea was developing and the various areas could be continually refined and adjusted. In sketch # 12 (plate 20) the lintel effect along the lower edge was decided upon. Throughout the work on this sketch and the one following, studies were made of many artists, in particular Poussin and Tintoretto, whose quick compositional sketches were very informative as studies of tonal structure. Plates 21 and 22 show rough

but strongly organized and vigorous arrangements of broad tonal areas. They are bases on which were built more detailed, but still broadly organized paintings.

My discovery of evident parallels between works of art and nature forms opened a new avenue of exploration. For example, an interesting comparison was noted between the photograph of a vulture's middle claw bone (plate 23) and an early Greek lintel (plate 24), in the use of structural reinforcement for a form bearing stress. In the case of the lintel, the logic of the eye is again supplied. This particular parallel was productive of ideas for handling the area between the stabilizing block form of the central group and the center of the arch form above, as may be noted in plate 20. It was soon found, however, that the sort of knowledge that permits convincing use of horses' legs in the manner of a bone structure comes only with a thorough study of all kinds of natural forms and the principles common to them all. Early in his study the artist must confine himself to specific forms and their specific structural make-up in order to be convincing.

Sketches #12 and #13 are particularly concerned with the problem of scale, aided by working always with the drawing of the whole side of the wall. The figures on the left side of the mural were too small in scale unless treated tonally as one large form. They then began to be better organized with the large architectural forms in the room. In the attempt to treat the right side of the painting

in a similar manner it was discovered that this area became too large in scale for the room and for its occupants, and needed to be broken into slightly smaller forms. The thirteenth sketch (plate 25) continued the attempt at broad treatment and simultaneous definition of form, a difficult matter. The various areas needed to read more solidly (here the sketches of Poussin continued to be of great assistance), to be blocked out in large groups of tone.

Plate 26 shows advance to a new medium and the use of color, in a combination of casein[1] and oil paint. Casein white had the advantage of drying quickly and provided an underpainting for the light tonal areas, which could be thinly glazed with oil colors. The oils were just as satisfactory for the purposes of the sketch as sole use of casein because a translucent color could be obtained with a few daubs of the brush, and also, the oil could be applied impasto with the palette knife for quick modelling of darker areas, while still maintaining clear color. The approach to composing the sketches which had gone before radically affected my handling of the color. I was not afraid of using many clear bright colors, because I found that by thinking in terms of tonal organization instead of hue, almost anything could be done with color and it would still hold logically in a pleasing relationship. There was continued working for structure

[1]See technical discussion of casein paint, page 17

and construction of specific forms (many sketches were made at this time, some of which are illustrated in plates 27 through 35). The color sketch was not carried very far. From previous experience I knew that enlarging at the rate of one foot to one inch would necessitate considerable adjustment, and the new materials and environment would call for new solutions. A full sized cartoon was not made, as would be called for in designing a fresco, because the casein process allows considerably more re-working than fresco. The sketch was submitted to Mr. Lester Ries, director of the redecoration of the library, and approved by him.

CHAPTER II

THE MURAL EXECUTION

Previous to the actual painting, several technical problems required solution. An artists' casein paint was chosen as the most effective medium for the mural, because of the glowing color possible to achieve with it, and because of the non-glossy finish. Of the secco processes casein is the most brilliant and durable.[1] It is of course inferior to true fresco in durability, but the craftsmanship and time involved in buon fresco made such a technique inadvisable for this problem. Moreover, the feeling given by the luminosity and clarity possible in this medium, as opposed to the more opaque quality of fresco, was more in keeping with the needs of the children's library.

The special character of tempera paints (artists' casein is included in this category), that provides the painter with possibilities for crispness of handling and a translucent quality, is owed to the fact that their vehicles are emulsions. An emulsion is a "homogeneous, stable mixture of an oily ingredient and an aqueous (dissolved in water) ingredient".[2] Oily materials (fats, waxes, and resins as well as oils) can be combined with water solutions if one or more of the ingredients is a

[1] Mayer, Ralph, The Artist's Handbook of Materials and Techniques, page 297.
[2] Mayer, Ralph, The Painter's Craft, page 138.

good emulsifier or stabilizer. These emulsifiers are, for the most part, colloidal solutions of gums or gum-like materials. Two conditions are necessary for making an emulsion: (1) a thorough and vigorous agitation of the watery and oily ingredients and (2) the presence of an emulsifier of the correct type. For instance, water-soluble gum and linseed oil are combined and stirred vigorously causing the oil particles to become suspended uniformly in minute droplets. They will remain suspended and dispersed in a good emulsion. Milk is an example of a natural emulsion, in which the oily ingredient (butter fat) is suspended in a solution containing casein and other materials which are good emulsifiers. This casein, being a good emulsifier, as is the yolk of egg used in tempera, forms the basis for the paint medium which I used. I did not mix the dry pigment and the medium myself, but used the tube paints produced by M. Grumbacher, Inc.

The entire room including the surface on which the mural was to be placed had been painted in October of 1948 with commercial oil paint. It was found that the casein would adhere to this surface satisfactorily.

The materials used for the painting are as follows: approximately twenty tubes of various pigments, brushes varying from 3/16" to 2", two coffee cans, one for clear water, the other for brush rinsing, a muffin tin for mixing water with pigments, a cake of soap for brush cleaning,

and a package of paper towels having many uses. The painting was done from a 4 x 6' scaffold at the level of the bookcase top.

Work on the wall proper began December 20th. The wall was squared off (using blue chalk on a string, which was stretched taut and quickly released, leaving a line across the wall) and a summary outline drawing in charcoal was made from the small color sketch. A few days were spent composing the drawing, though not as much time was allowed for this as would be the case in the drawing for a wood panel where changes during carving are not so easily made. The first step in paint application was a large blocking out of areas in two general tones. The wall itself was a light tone of yellow, so that the light tones in the mural required roughing out in white as a basis for other colors. The darker areas in the composition were indicated by a medium tone of the general color desired in the final effect. This medium tone was achieved by mixing white paint with blue and green, or with cadmium red, as the case required. It should be noted that at no other time during the process of the mural was the paint actually mixed in the tin, but was built up by means of layers of different colors, whose application in small brush strokes allowed the colors beneath to show through. The dull effect of the mixed color areas applied as an underpainting was ample evidence of the advisibility of the

building-up process. When the underpainting was completed, the scale relationships were fairly evident, since the general large tonal pattern had been established, and seemed to work adequately with the scale of the room. There was some adjustment necessary even at this stage, however, for as I mentioned above, the greatly increased size, the new material, and the new surroundings demanded their own particular solutions which could not possibly have been fully forseen in a sketch. Nor should the artist wish that they could be. The organic growth of any work is a challenging and highly exciting process, as the mind is taxed at every step in facing needs arising directly from the work in progress. The development of a mural from sketch to completed painting should be analagous to the growth of a seedling to the mature tree; at every step in this development, even as growth occurs in nature, the final forms are suggested, but they are not crystallized or preconceived.

The next prodedure in the mural painting was that of laying in various color areas, generally similar to those colors indicated in the sketch. In the determination to keep the color clear, there was a necessity for experimentation, since my limited experience was not equal to forseeing the final effect of juxtaposed colors. However, working with casein, a very quick-drying paint, allowed almost simultaneous application of various colors to produce a desired color and tone. This "desired color and tone" was

only a probable one, also, and demanded constant revision as the whole mural grew. As in any artistic production, the ability to keep the whole progressing at approximately the same rate at all times solves the impossible problem of jockeying parts against each other that are at different stages of development. "An engraver, painter, or writer is in process of completing at every stage of his work. He must at each point retain and sum up what has gone before as a whole and with reference to a whole to come."[1]

At first the color areas, in order to preserve clarity, were made much too vivid, but I learned to suspect their potentialities and also soon discovered the dull results of faint-heartedness in the use of color.

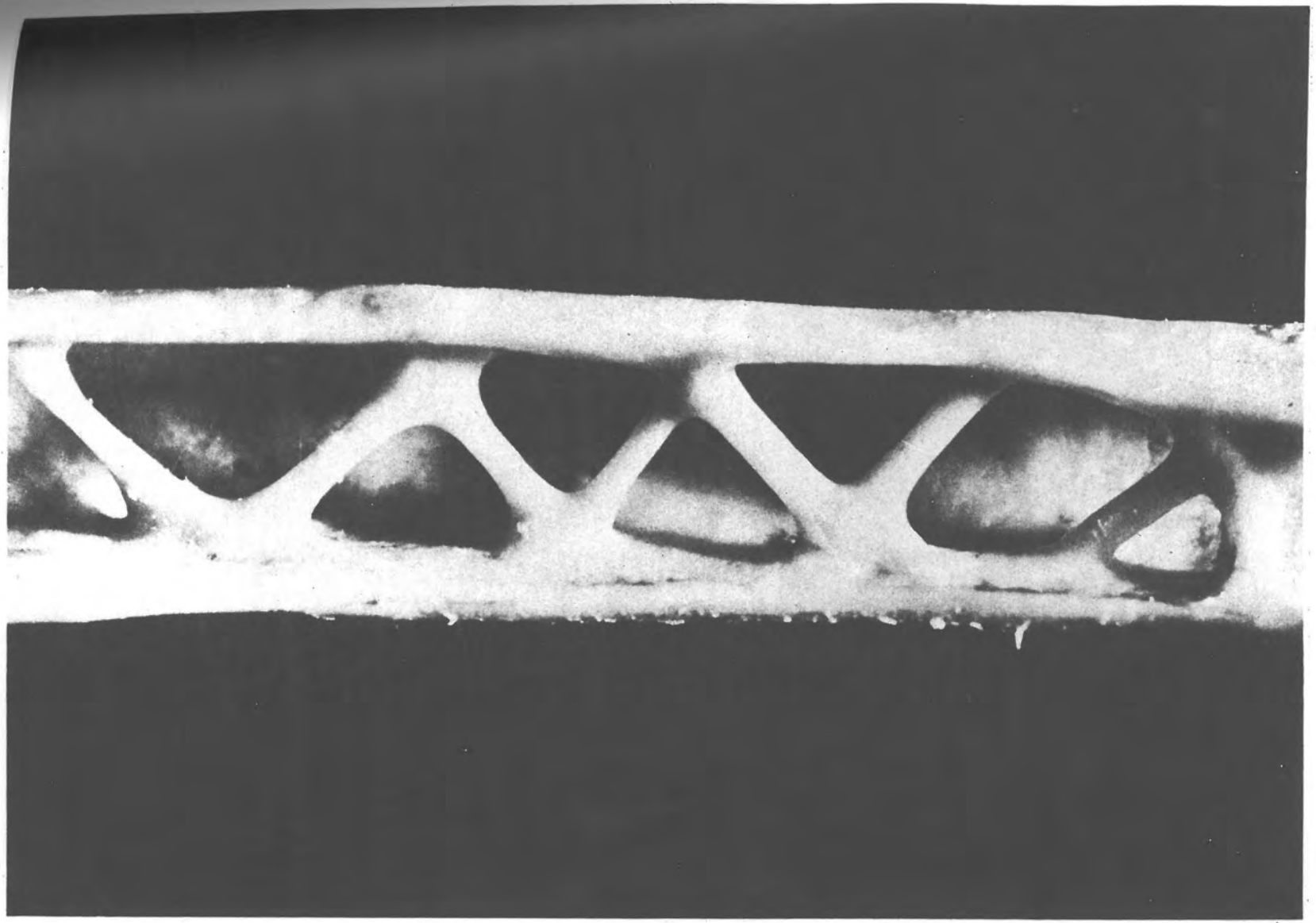
The problems that confronted me all together as the work began were almost overwhelming at first. As the work continued, however, each step demanded another and it went quickly, especially in the first weeks when broad areas of tone could be laid in without much definition.

While these broad color areas were being organized, some redrawing was done. As can be seen in the first photograph of the mural taken February 1st (plate 36, fig.2), Cinderella's horses, Sleeping Beauty, and the children in the center were redrawn from more precise photographs and sketches, because these poses were felt to compose better

[1]Dewey, John, Art As Experience, page 56

than those indicated on the sketch. Other changes occur throughout the painting process, for as each part developed, manipulations in the forms and shapes were demanded by the developing logic of the work itself. Whenever an area refused to compose, new sketches from life were made, and thus many ideas for shapes and tonal arrangements presented themselves. In looking over the series of mural photographs, changes in the mice, librarian, and fairy are particularly noticeable, though all the forms in the mural when defined required considerable adjustment. It is easy to see in the February 1st photograph that a great deal of composing can go on within the vague areas indicated. In the process of closer and closer definition of shapes and volumes, it became increasingly difficult to keep the mural from looking saccharine, due mainly to a tendency to softness in drawing. Life sketches became more and more necessary for observing the structure of natural forms and the manner in which the turning of planes reveals that structure. Until some of this strength in natural forms could be visually understood, the drawing would always lack richness and a feeling of control.

At this stage, the color areas, as well as the drawing, tended to be saccharine and thin. Large areas of light green and yellow had been indicated for future building up, and made the effect of the wall rather disturbing. Also, the problem of keeping the dark areas alive began to make itself felt. The photograph taken February 15th



Vulture's Middle Claw Bone

precluded the use of a "logical" common source of light. Light tones were used on the side of the figure where they were needed by the logic of the painting itself, not in accordance with a common external light source.

From the second month of working, the painting process became increasingly difficult and discouraging. As careful definition was required, more and more frontiers of knowledge were reached. My vocabulary of form was limited, and committing myself as to the precise manner of turning a plane or outlining a shape was a great struggle. This situation required many life sketches (plates 39, 40, and 41 show later studies from life having a better sense of total organization than those previously illustrated). It required much reference to nature photographs, and to the work of other artists, and a great deal of thought in transposing what had been learned into its new form in the mural. For example, strongly constructed drapery such as is seen in the northern European schools of the 15th and 16th centuries (see plate 37) was studied. Specific drapery arrangements would not be copied, however, for their use in a new form was dictated by new demands. Similarly, flower photographs for the background areas were studied for their varied and beautiful shapes, and then transposed into a broad arrangement as required by the mural.

The work began to go more slowly. As color areas

were enriched with dark accents and built up in color combinations, it became difficult to maintain the fresh clear quality. I would change my mind often on seeing that a color area did not work as well as it might, or I would use two colors unsuccessfully and produce a muddy effect. Sometimes two colors would form a pleasing relationship in a certain place and with a certain manner of application, and sometimes the same two colors would combine badly. I found only one general rule, that close complimentary colors when glazed over each other produce a muddy effect. Thus, a process of experimentation went on in this phase, as well as in all others. Often an area had to be scrubbed, repainted with white and tackled again.

Three areas in particular seemed troublesome throughout the painting of the mural, and required repainting many times. For quite a period, the composition involving the fairy godmother was unconvincing. In this case, it proved helpful to look at Renaissance angels, to browse through fairytale illustrations, for ideas of how to picture such a being. Books on butterflys suggested methods of treating the wings, and finally an amalgamation of various ideas produced forms that gave hints of composing in their shapes and tones, and the area could be developed. After the fairy was completed, the castle in the left hand corner continued to balk resolution. This particular spot was the most linear part of the mural, and it seemed

impossible to make it gain a sense of volume. The modelling lacked the right kinds of tonal transitions, and consequently the parts were divorced from each other, giving the effect of outlined spaces rather than solid shapes.

The groups of children had been a problem at an early stage, and the greatest difficulty had been an insufficient scale in relation to the surrounding forms. By increasing the size of the children and consolidating the tones in that area so that several children read as one large area of tone, the whole mural was made to compose more successfully. The children remained a problem even after the scale had been adjusted, however, due to the difficulty of working largely from photographs instead of from life sketches.

The third area which presented difficulties in composition was that central space, above the grouping of children, on which the horses are supported. The mural required in this central portion a strong form, giving the effect of a beam or lintel abutting in a pier at either end. It was difficult to relate the tonal areas between the very dark section below the beanstalk leaves and the light top of the painted bookcase, and still make this read as a strong light tone. Flower patterns were used here at first in a rather concave shape across the bookcase top, but were finally discarded in favor of a rock

form after considerable experimentation. The rock lent itself to more sharply defined planes and a more rigid general shape which strengthened the structural organization of the mural in this part. In order to relate the rock tone to the dark tone above it, a leaf pattern was used along the upper edge of the rock, and some of the blue leaves above the rock were extended over it. The development of the areas discussed above may be followed in plates 36 and 42.

As the mural developed, the background areas needed defining and enlivening. To hold the background as a flat pattern would provide an enclosure of the space in which the volumes of people and horses existed as a sort of low relief, and also supply areas of rest, so to speak, for the eye. Without consciously considering the above suggestions at first, I had felt the need to use a flat treatment of the flower forms. That treatment seemed to be one of the things suggested and even demanded by the wall. This effect had not been worked out at all in the sketches, but the examples of murals and tapestries used for reference during the composition of the sketches served as an influence in this direction, even though it was not consciously noted. Historically, the most lavish use of a flower patterned background is seen in mille fleur tapestries, one of which may be seen in the Allen Art Museum collection (plate 43). This pattern serves precisely

the same function as the patterns of plants and horse trappings in the Gozzoli mural (plate 38), the brocades in the Van Eyck (plate 37), and the Persian print background (plate 10), except that in the case of the tapestry the background is manipulated with greater delight as a more important part of the total effect.

There were several problems which required constant attention throughout the latter stages of the painting. Most of these problems were concerned with achieving richness. Richness of color and tonal range were necessary and difficult to achieve. The color areas had sometimes a tendency to appear thin and flimsy, with only clarity of hue to recommend them. These areas would need a dry-brush application of another color, or perhaps a thin glaze. An earth red might be used in a thin wash to enliven and make warm a light blue; in every case, the glaze color must be applied over a lighter or similar base tone, for translucence of combination. This glaze, as in the use of oil paints, is merely a small amount of pigment and a generous amount of medium (in this case, water, and in the case of oils a mixture of varnish, oil, and turpentine).

The entire mural was in need of the sparkle that can be given by well-placed dark accents, that is, the use of a complete range of tone, and between the attempt to use this range and to give depth and variation to the color, many discouraging hours were spent seeking a color which

would not give a muddy or heavy-handed result. However, once a few vivid accents were placed in an area they pointed the way to further development of the whole.

Still another phase of this striving for richness concerned the drawing itself. One general tendency with beginners in drawing, I believe, is the unconscious use of a slovenly S-curve in the attempt to give warmth and liveliness to an outline. Nature will exhibit many variations of curves, but they are combined with strong straights; witness the flank and foreleg of a horse. These shapes become beautiful in nature when the structure which imparts their outline is a functional one (the curve seen in a sway-backed animal is not beautiful, because it indicates malfunctioning). The drawing of the horses in plate 10 is sensitive and strong in its combination of rich curves and terse straights and is not imitative of the surface appearances of nature but follows her principles in its sense of related forms which have thus a promise of function.

The most troublesome problems toward the completion of the painting were those concerning scale in the treatment of more detailed forms. The hands and faces required broad handling in keeping with neighboring forms, and my tendency was to treat them too realistically and in an overprecise manner. The ample scale of Michelangelo's heads was helpful in coping with this problem. The features and planes of the face are painted broadly giving such a detail as that illustrated in plate 44 a monumental scale.

A careful study of the photograph taken April 12th pointed up a weakness in structure on the right side of the mural in the area of the horse and groom (plate 42, fig. 3). The lefthand side composes in a pleasingly solid block of tone, indicating that a lightening of tone around the legs of the horse and groom might strengthen this section of the mural. Reference to the final color sketch (plate 26) showed that I had used a lighter tone in this area. Although the sketch was seldom referred to after the first few weeks of painting the mural, occasional comparison between it and the wall pointed out solutions which happened to be more successful in the sketch. This comparison had helped particularly during the composition of the area below the horses' feet. In comparing the strong form in the sketch to that in the mural before use of the rock was decided upon, it was seen to be necessary.

The final photograph, plate 45, shows the strengthening of the right corner area discussed above. This wide-angle photograph was taken in the attempt to illustrate the manner in which the structure and scale of the mural relate to the surrounding architecture and to the children who use the room, for these were my main concerns in composition. The style of the painting is not a result of the attempt at a certain type of expression, but is merely a natural outgrowth of my manner of thinking and solving problems. I hope that the reader will go to look at the mural itself, for its feeling is different from the effect

given by photographs.

I have learned many important things from the creative effort expended in this problem and its solution. One of the most important is that, in the words of Louis Sullivan, "every problem contains and suggests its own solution".[1] And further,"...the very nature of the limiting conditions suggests to us what must be the nature and the limitations of the solution. If you are searching for a peanut you come to know by experience that you will not find it within the burr of a chestnut. Thus a given problem takes on the character of individuality, of identity. And you become aware that your solution must partake of that identity". I have learned that in searching for a mural design I will find it within the nature and limiting conditions of the materials of which it will be formed.

[1]Sullivan, Louis H., op. cit., page 164

APPENDIX

PSYCHOLOGICAL EXPERIMENTS CONCERNED WITH ILLUSTRATIVE MATERIAL FOR CHILDREN

The body of information on the subject of illustrative material for children is extremely limited, but some conclusions of interest may be drawn from the available writings. In the 1920's, experimentation in the field of children's picture and color preferences was on the whole not sufficiently extensive and controlled to produce much important evidence.

A report by Florence E. Bamberger, in 1922, was the most productive of early experiments, influencing the printers of children's books in use of binding color and type of illustration. Her conclusions are that in choosing a book by its binding, younger children prefer crude elementary color, a high degree of saturation and brightness. The older children choose softer tints and tones. Blue is the favorite color, red and yellow alternately second and third. The type of illustration which seems to be preferred by primary children is that embodying humor, action, and story-telling appeal, and full page illustrations are popular. Books containing a large number of illustrations are most appealing.

An experiment conducted in an Indiana art gallery a few years later by Florence Williams tested 939 children from the fifth to eighth grade in responses to a representa-

tive group of portraits and landscapes. Her conclusions are that there is a strong tendency among the children of this age group to like the same pictures, and the reasons for their preferences are based on the depiction of people, places and incidents which are familiar, or have been read about. Of the portraits the most popular painting was of Leo Ornstein playing the piano, by Leon Kroll. The next choice was a painting of a little girl. In the landscapes, preference was noted for the use of a few large easily distinguished forms in the foreground. Story-telling appeal was not evident as a basis for choice, but the pictures used for testing were not concerned with this as a group, as book illustrations would be.

Experiments with color preferences were made in 1925 and 1926 by Olive Riker and Mary Polson, both indicating enjoyment of intense or saturated color in the primary grades, especially the warm hues, with the exception of yellow, tending toward cooler, less intense colors in the choice of older children.

Helen Martin's compilation of a series of studies concerning children's preferences in book illustration is one of the more important sources, due to the range of experimentation and the corroboration presented in the close agreement in results of limited case studies and broad school studies. This experiment was carried on by students of Western Reserve University in the Cleveland Public Library, and the Cleveland Public Schools, to

ascertain the value of the illustration in arousing a reading interest. In the preliminary case studies, 48 children in each of three groups (pre-school to 3rd grade, grades 4 to 6, and grades 7 to 9) were shown illustrations from ten popular books in that age group and asked to tell their preference and give reasons for the choice. The findings were that the group always had decided preference for a certain few books (the children were not allowed to influence each other in choices, and if the child lost interest the testing was terminated). The school studies which were then undertaken tested children in the same grouping as noted above, but over a much wider range, in seventeen schools, fifteen public and two parochial. The interest indicated in the previous studies in content, familiarity, pictorial treatment, and process, in that order, was utilized in forming a series of five illustrations to fit roughly in each of the categories, in order to check more precisely these indications. The conclusions coincide with the previous case studies. The first reason for preference continued to be the pictorial content, the realistic story-telling quality, for all ages. Second was the familiarity of subject and third the color, intense primaries for the lower age group, tending toward softer tones later on. The following various general conclusions were drawn: the decorative treatment is not popular, interest in landscape evolves early, animal illustrations are great favorites, as are illustrations with a humorous pre-

sentation. The upper primary grades like imaginative figures, and composition impresses only the older children. The sex differences in choice begin in the fourth grade and reach a peak in the ninth, the girls preferring home life, the boys action, especially of the chivalric age. It is interesting to note here, however, that both boys and girls in the older groups voted first place to Howard Pyle's illustrations for The Boy's King Arthur, Maxfield Parrish's for Arabian Nights, and N.C. Wyeth's for Westward Ho!. It was also found that previous classroom studies on other subjects influence picture choices (one of the elements which makes experimentation in the field rather dubious as to result). It was found that the size of illustration makes little difference, that nationality is not a determining factor (in the preliminary case studies using 48 children, seventeen different nationalities were tested). Four-color half-tones and lithographs are the most popular processes.

In 1932, Bonnie E. Mellinger made a carefully controlled experiment to discover what pictures appeal to children, but reported little of decisive importance. She tested the interest in color as compared to black and white, and the realistic style as compared with conventionalized style. She kept her content constant by having one artist make drawings of three subjects, an animal (elephant), a tree (pine) and a child(girl), in black and white, two color, and three-color, and in realistic and conventionalized styles.

For the 821 children tested (first, third and fifth grades) the general conclusion could be drawn that realism and color were the basis for choice. Miss Mellinger suggests more research on subjects lending themselves to variation in color combination, color preference in drawings of the same subject, the influence of realism in pictures, and interest in detail, mass, light and dark, line, size, and kinds of content.

In 1933 there were several studies. Waymack and Hendrickson conducted an interesting experiment using book illustrations for testing which had been chosen by competent teachers and educators. There proved to be an amazing discrepancy in these and the children's choices. 219 children from the 4th to 6th grades having had no training in picture study chose pictures for these reasons, and in the following order of importance: people, prettiness, color, scenery, previous experience, story interest, and realism. 179 students of the same grades, trained as recommended by notable educators in appreciation of technical elements, made their choices in the following order: color, people, scenery, water, ships, prettiness, with much emphasis being placed on technical elements such as center of interest, color repetition, color contrast, perspective, light and dark pattern.

G.H. Hildreth experimented in 1936 with color and picture choices of young children. 138 children from 3 to 6 were tested with various illustrations, and with

samples of ten colors. It was found that orange was the most popular color, pink second, and red third. As this experimenter mentions, the experiments on color preferences are bound to yield contradictory results since the subjects vary in different tests, colors used for testing vary, suggestibility may enter, materials vary, and young subjects are unstable. It was noted, however, that there was an overwhelming preference for pictures portraying action and those including animals.

From 1937 to 1939 at the Cleveland Museum of Art, Betty Lark-Horovitz made a series of three investigations of child art preferences in relation to preferences of artistically gifted subjects. About 500 children from the ages of 8 to 16 were tested in contrast to 72 specially gifted students from 11 to 16. The first test concerned the preference of picture subjects in general and indicated definitely that certain kinds had no interest for the child, and certain others did have. There was no interest in interiors or still-lifes. Out of 70 preliminary paintings, twelve were chosen by children for the final test. The reasons contained in the preferences indicated interest in subject matter first, then color. The average and special groups showed a preference for the same pictures, according to age levels, though the special students tended to notice design elements. The preferred subject tells about things the child likes and wants to know, or

evokes associations and imaginings. Design counts only as accentuating the interesting subject. There is great difficulty, around the age of eight, in keeping boys' and girls' interests alive in the same subject matter, as was noted in Helen Martin's report. Miss Lark-Horovitz mentions a general interest in birdlife, sea, nature as such, reality and naturalness, with aesthetic elements only crudely present. Her second test on preference for portraits again sets interest in content first, color second. The choices of the younger children indicate identification with the hero or the implied action, attaching primary importance to the attributes of the person shown (clothes, jewelry, surroundings) rather than to facial expression or character indicated. The older children identify themselves with the character and emotions of the individual, and wish to look like him. A third test of the preferences for textile patterns shows interest first in the object represented, and then in the subject of the pattern as a pattern. Color comes next as supporting the choice of favorite objects. Arrangement, design and technique follow along at the end as reasons for choice. Out of 39 patterns, there were three preferred through all age levels. The interest was in patterns showing animals, flowers, people, and those stimulating associative imaginings.

M.A. Miller tested primary grade children (1st to 3rd)

in the choice of technique for book illustration and found that full-color reproductions received over half the votes. Wash drawing, line, and black and white techniques received insignificant percentages. In a later study, Miller found that children reported seeing relatively few of the items (even important ones) which make up a picture. Items are seen in isolation, he reports, necessitating guidance toward comprehension of the text through the help of pictures.

A test was made by W.H. Lucio and C.D. Mead in 1939 to determine the preferences of 436 children of intermediate grades and a wide social range for eighteen selected modern pictures. The reasons for choices are not in agreement with the order of importance suggested by previous investigators. The nature of the material used is most like that of the first Lark-Horovitz test and would be expected to yield somewhat similar results. The Lark-Horovitz pictures included both modern and older paintings, while this test concerns only the modern. Perhaps that would explain the interest in color as a prime factor. The second reason for liking the pictures chosen was the expression of a favorable quality. The third was expression of individual interests of the children, and the fourth, realism. Least interest was noted for story and action, a basic disagreement with most previous reports. The painting best liked was a landscape by Luigi Lucioni. Next choices included Heindel, Rousseau, Van Gogh, and Cezanne.

J. Todd tested the same sort of thing in 1943 by showing 13 modern and 13 traditional portraits and landscapes to ten, eleven and twelve year olds. The most influential reason for choice of these paintings, as shown by Lucio and Mead, was not subject matter. There were 628 reasons for choosing paintings by their qualities as opposed to 446 mentioning subject. Of the qualities, color was mentioned most often, then poetic feeling, brush stroke, and design quality. The most popular subject material in landscapes was water, quiet scenes, distance, trees, reflections in water. People who looked happy were most enjoyed among the portraits.

There is little substantial evidence which points out any specific factors as being of importance. Generally, the experiments seem in agreement that young children like bright colors, and prefer their book illustrations in color rather than black and white. An ability to comprehend only a few rather large forms in an illustration is indicated, and most of the experiments show an interest in pictures having a rather familiar action story.

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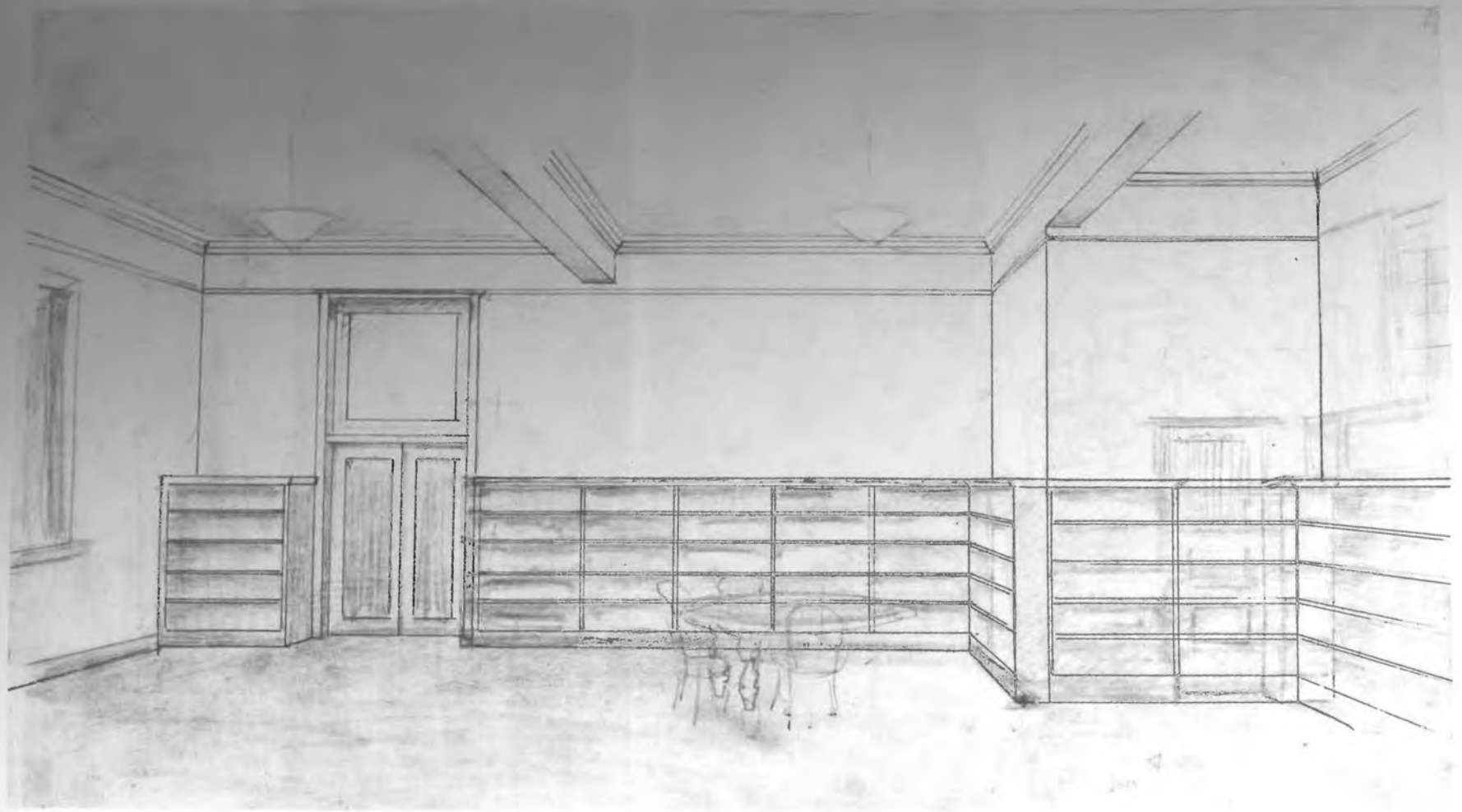
Sketch #1



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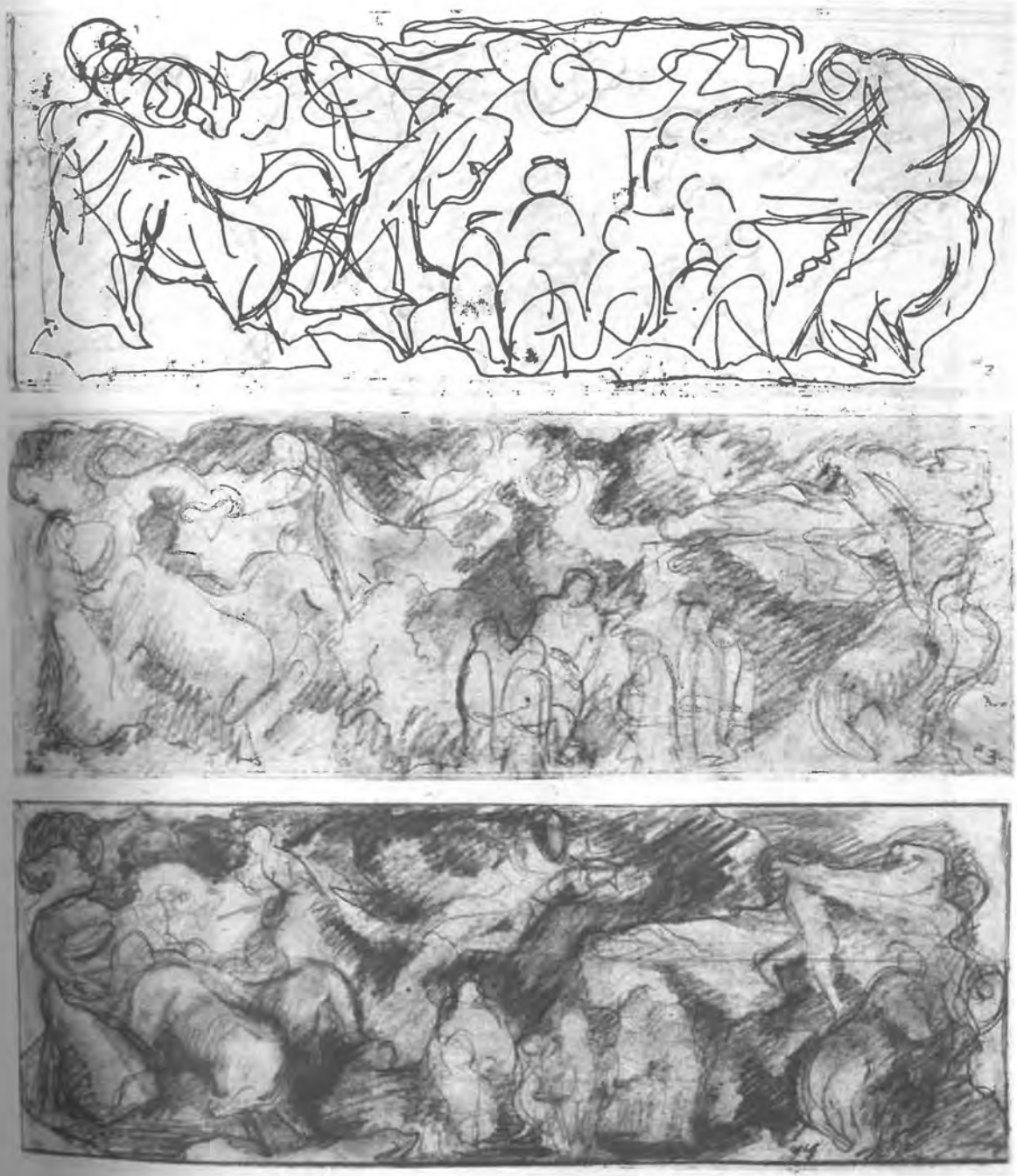
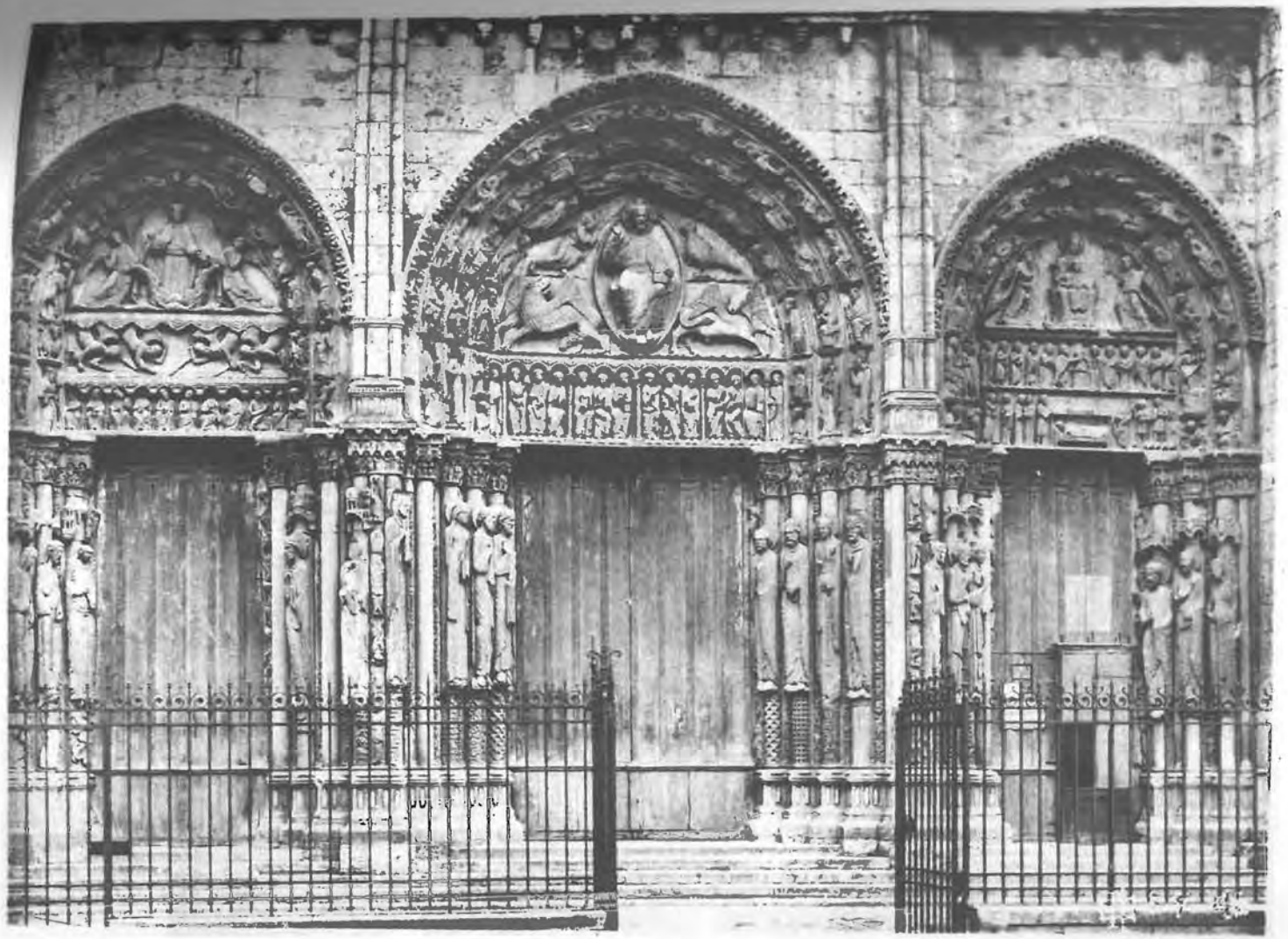


Sketches #3, #4, #5



Chartres Cathedral, West Portal
c. 1145

French

Arena Chapel, Padua
1305

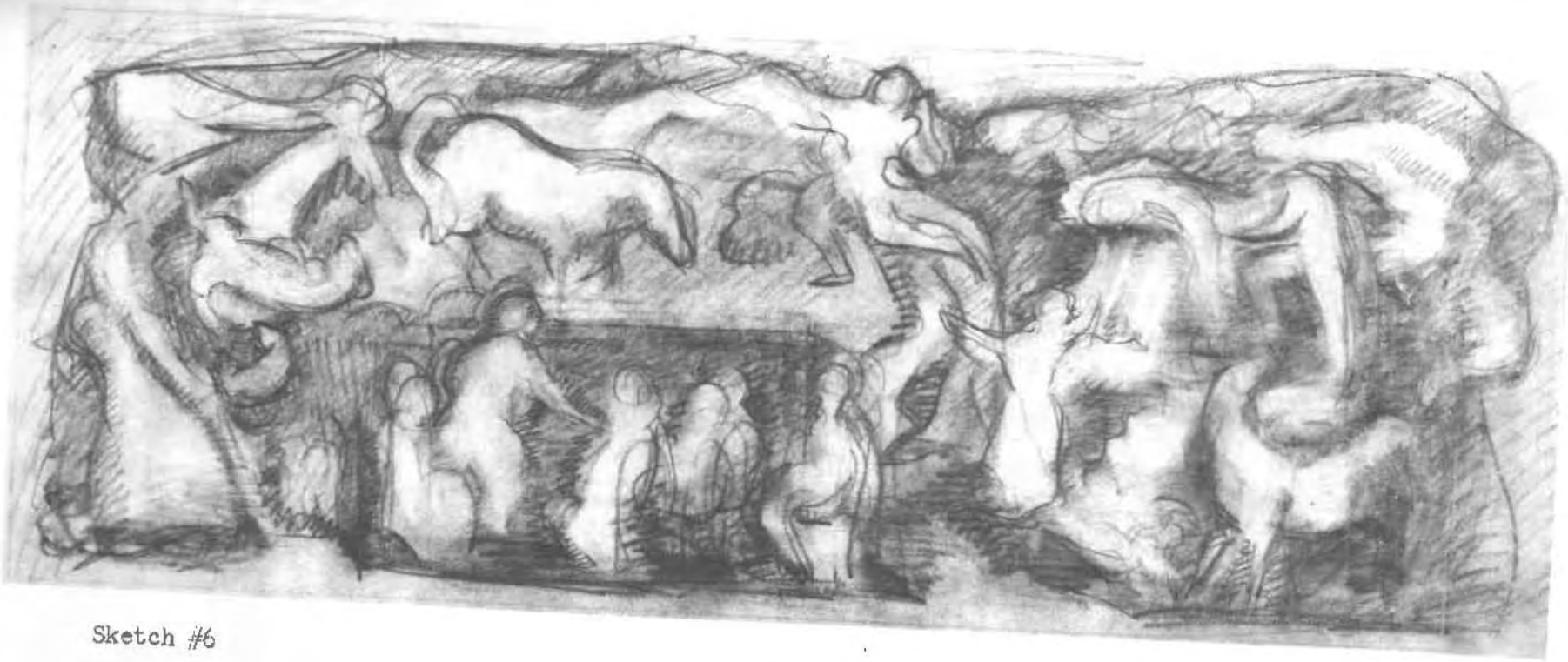
Giotto
Italian

Arena Chapel, Padua
1305

Giotto
Italian

Amitabha With Followers, Screen

Japanese



Sketch #6

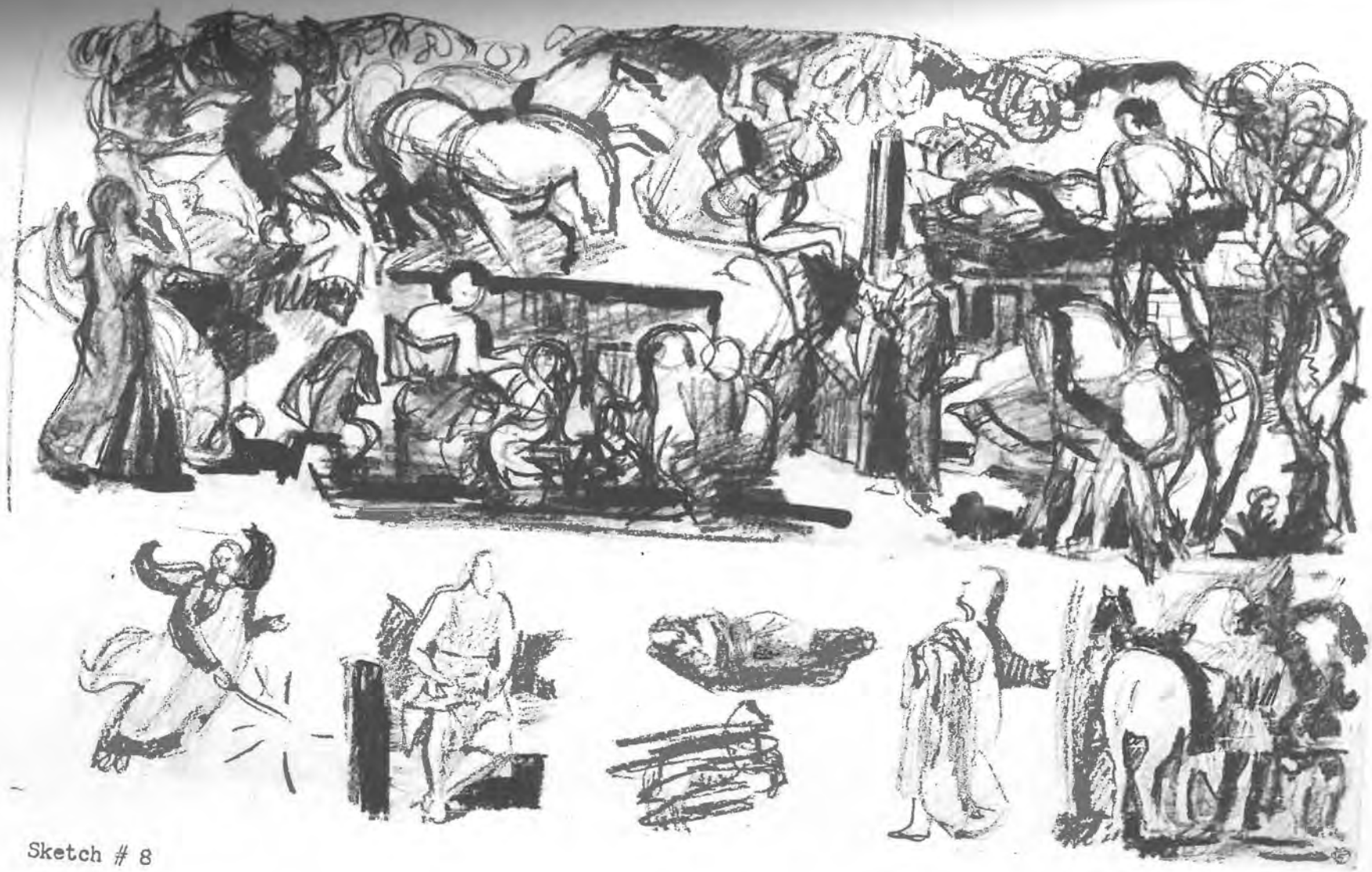
Sketch #7

Book Illustration
1420

Persian

The Wedding Feast, Arena Chapel
1305

Giotto
Italian



Sketch # 8

Visit of the Queen of Sheba, Det.
1452-66

Piero Della Francesca, Italian

Rout of San Romano, Det. c. 1435

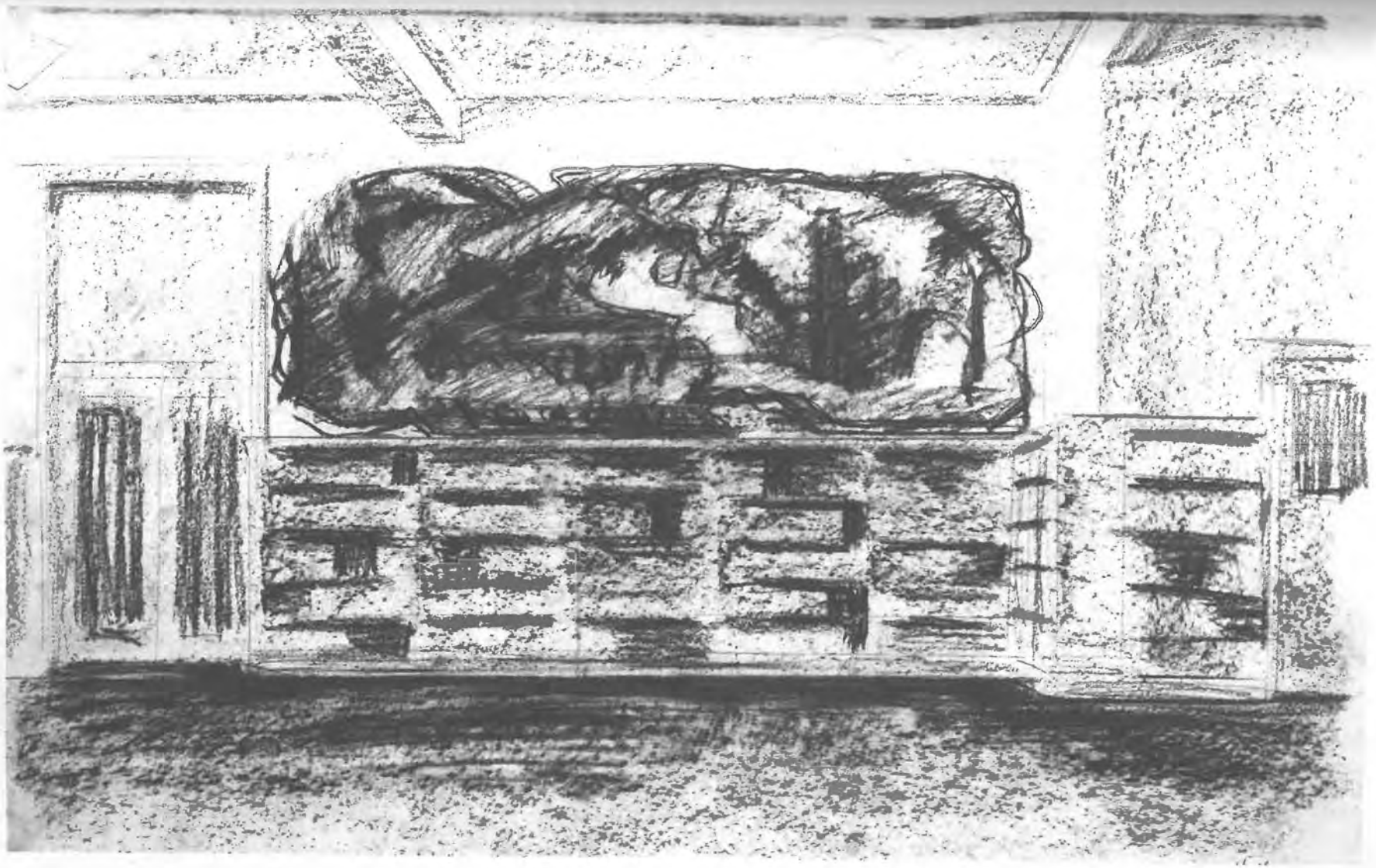
Paolo Uccello
Italian

Sketch #9

Christ Surrounded by
Symbols of the Evangelists
11th - 12th c.

French

Oberlin Trees



Sketch #10

Sketch #11

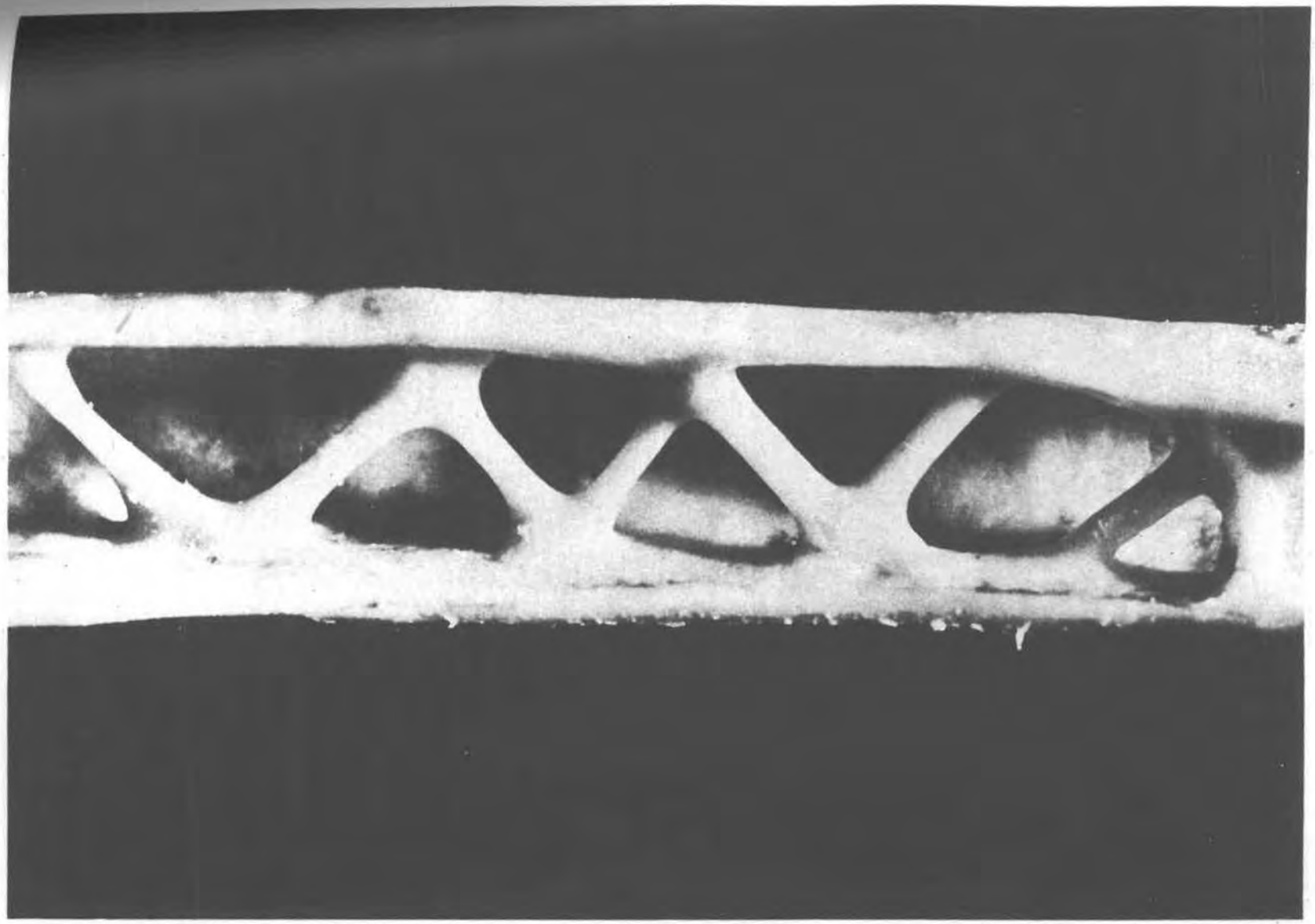
Sketch #12

Adoration of the Shepherds, pen and bistre wash
1632-33

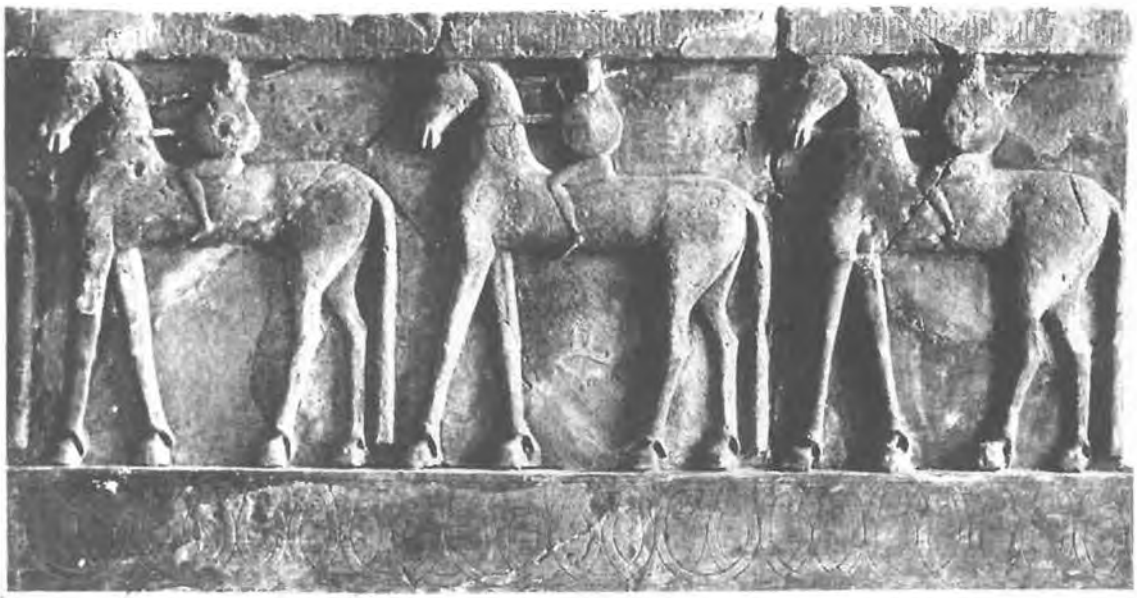
Nicolas Poussin
French

Sketch for Battle on the Taro
Late 16th c.

Jacopo Tintoretto
Italian

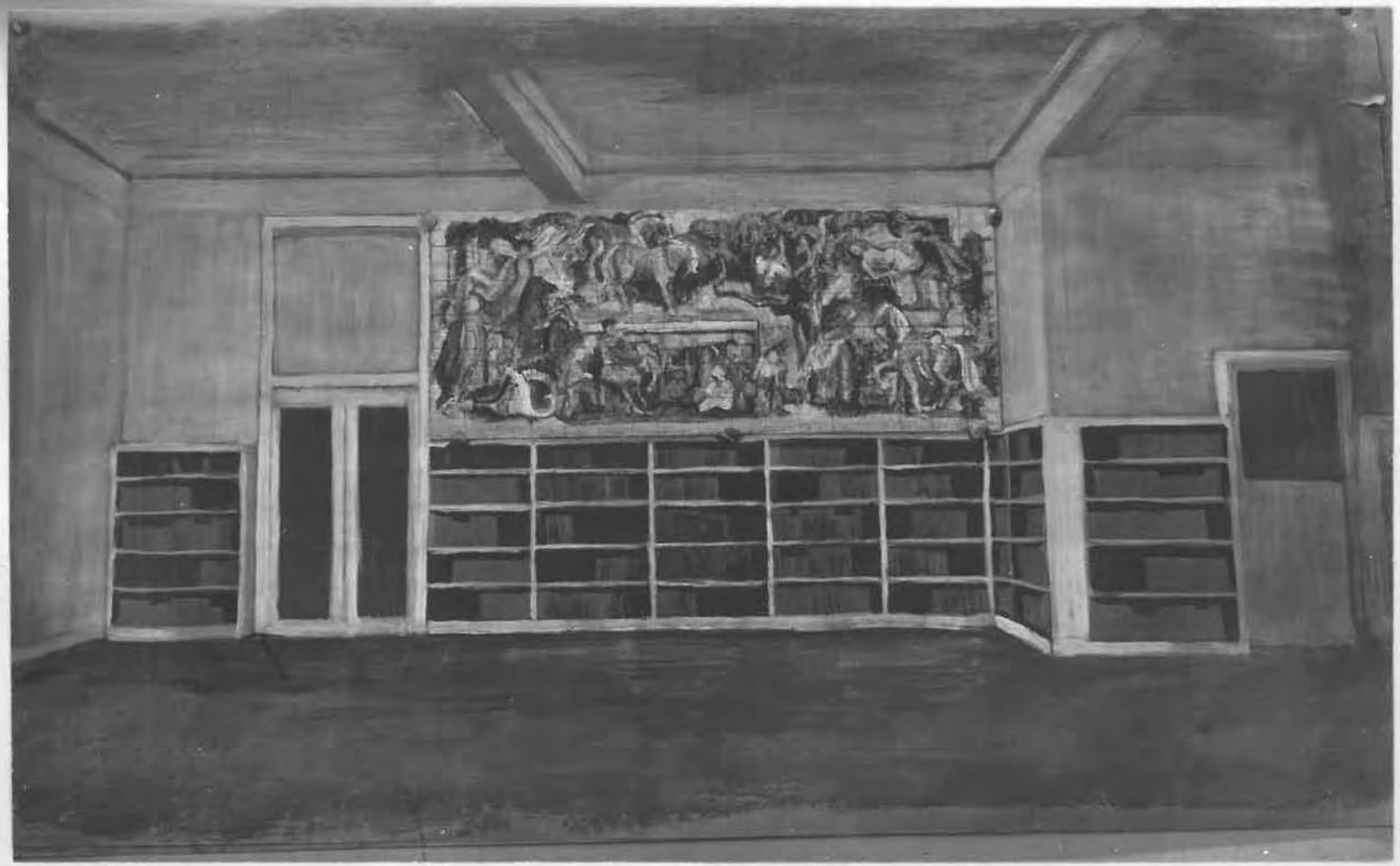


Vulture's Middle Claw Bone



Frieze of Horsemen, from Prinias — Greek
c. 625 - 600 B.C.

Sketch #13



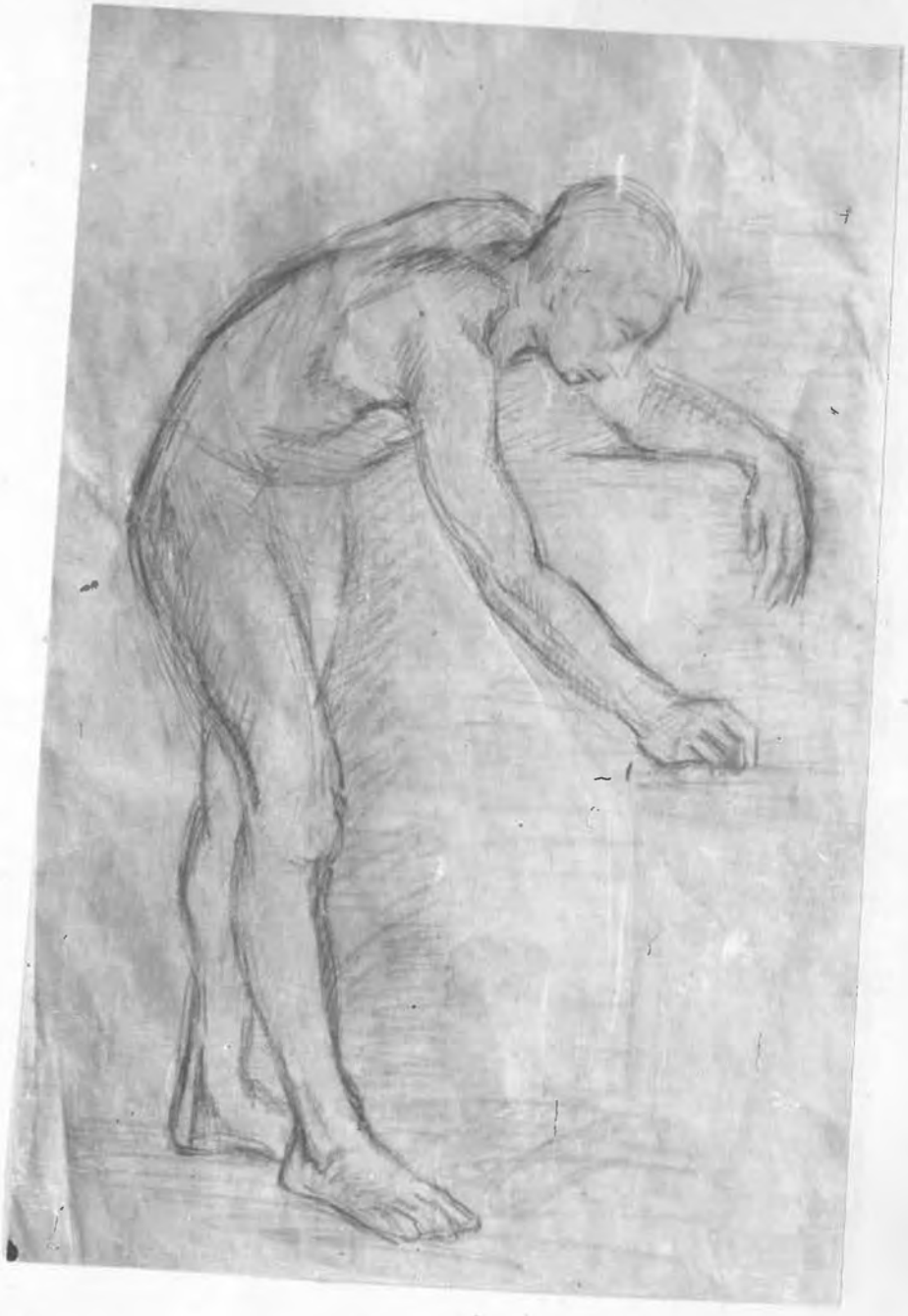
Sketch #14 Color

Life sketch for Prince

Life sketch for Prince

Life sketch for Beanstalk

Life sketch for Mice



Life sketch for Prince's Groom

Life sketch for Jack

Sketch from Photographs

Life sketch for Sleeping Beauty

Life sketch for Sleeping Beauty

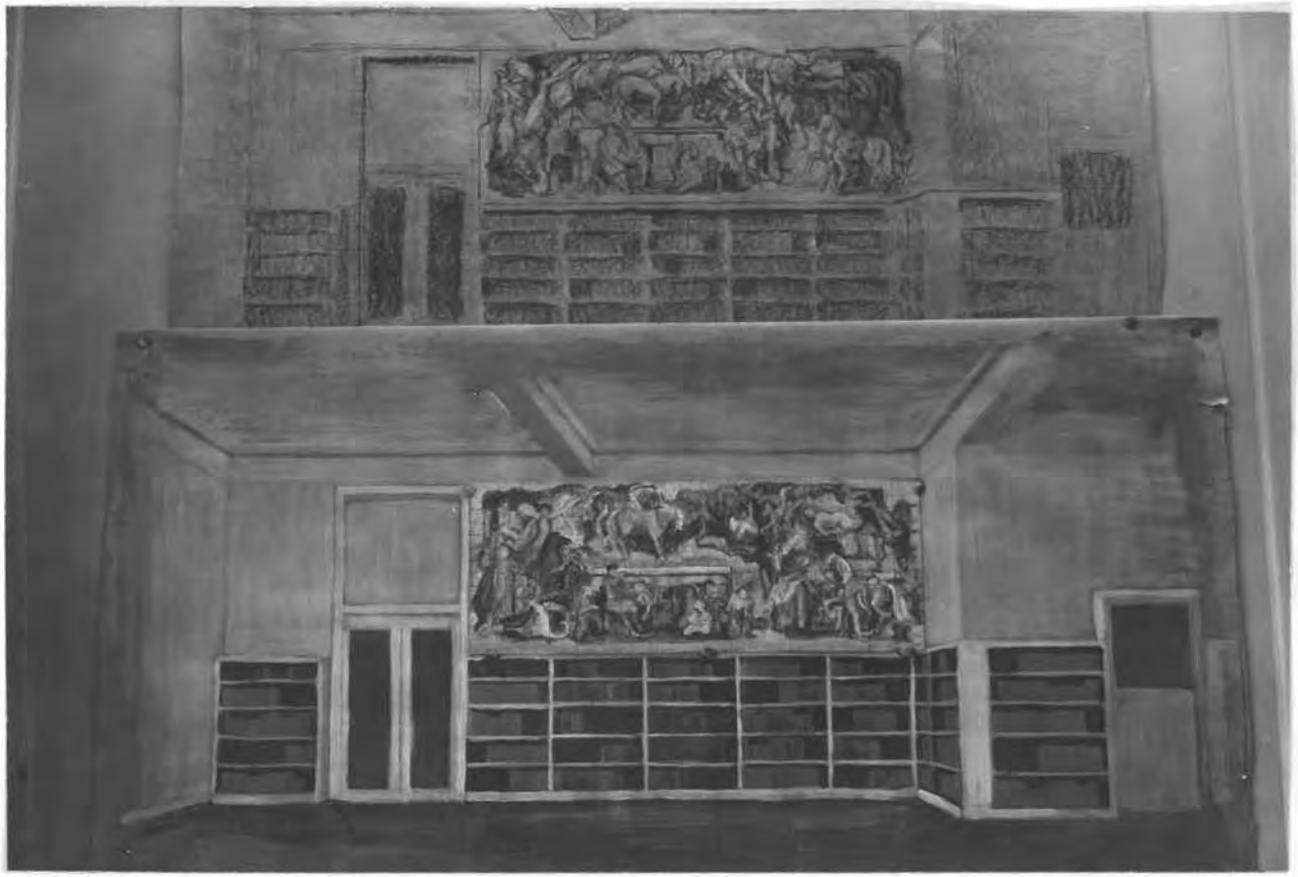


Fig. 1, Sketches #13 and #14

Fig. 2, Photograph taken February 1st, after 72 hours' work.

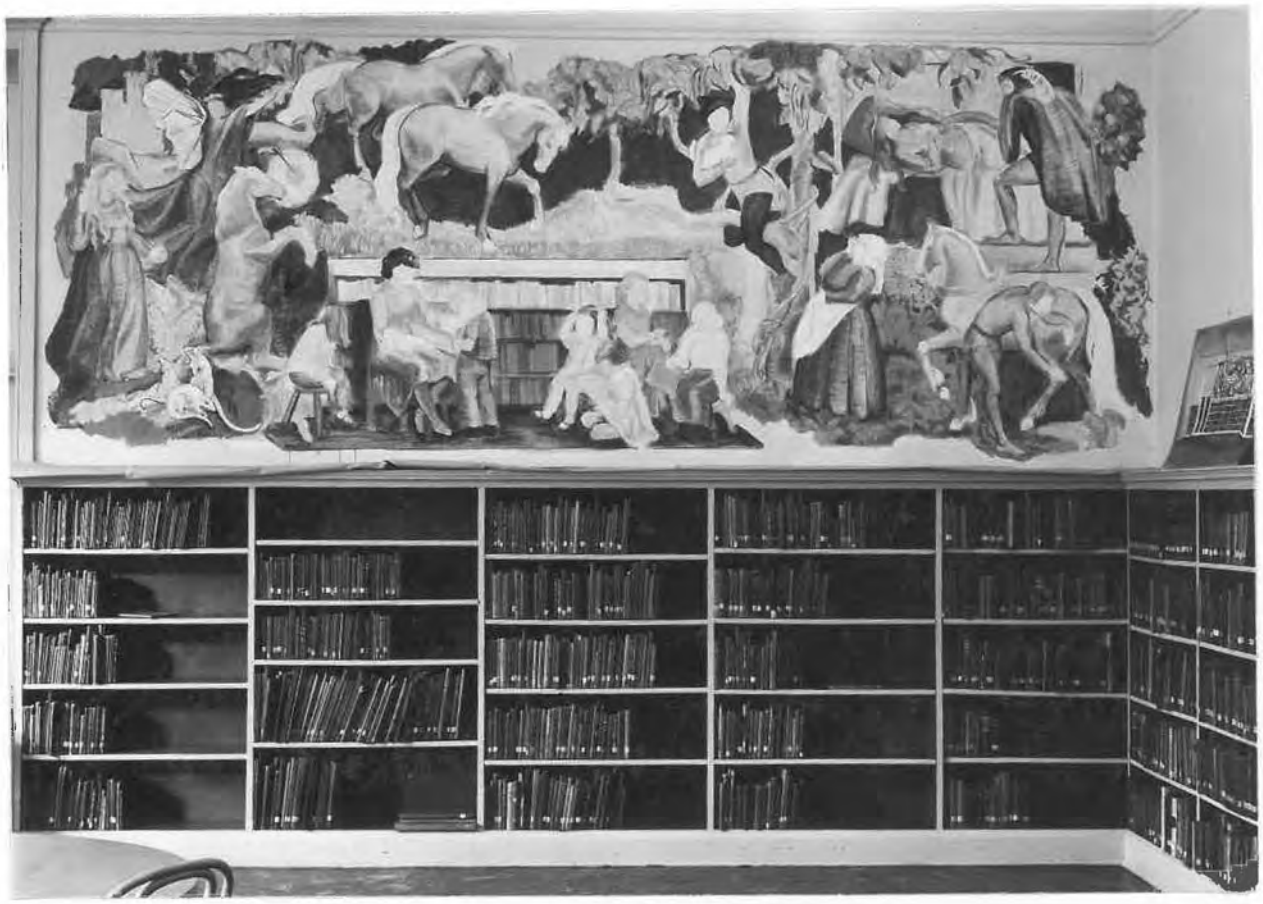


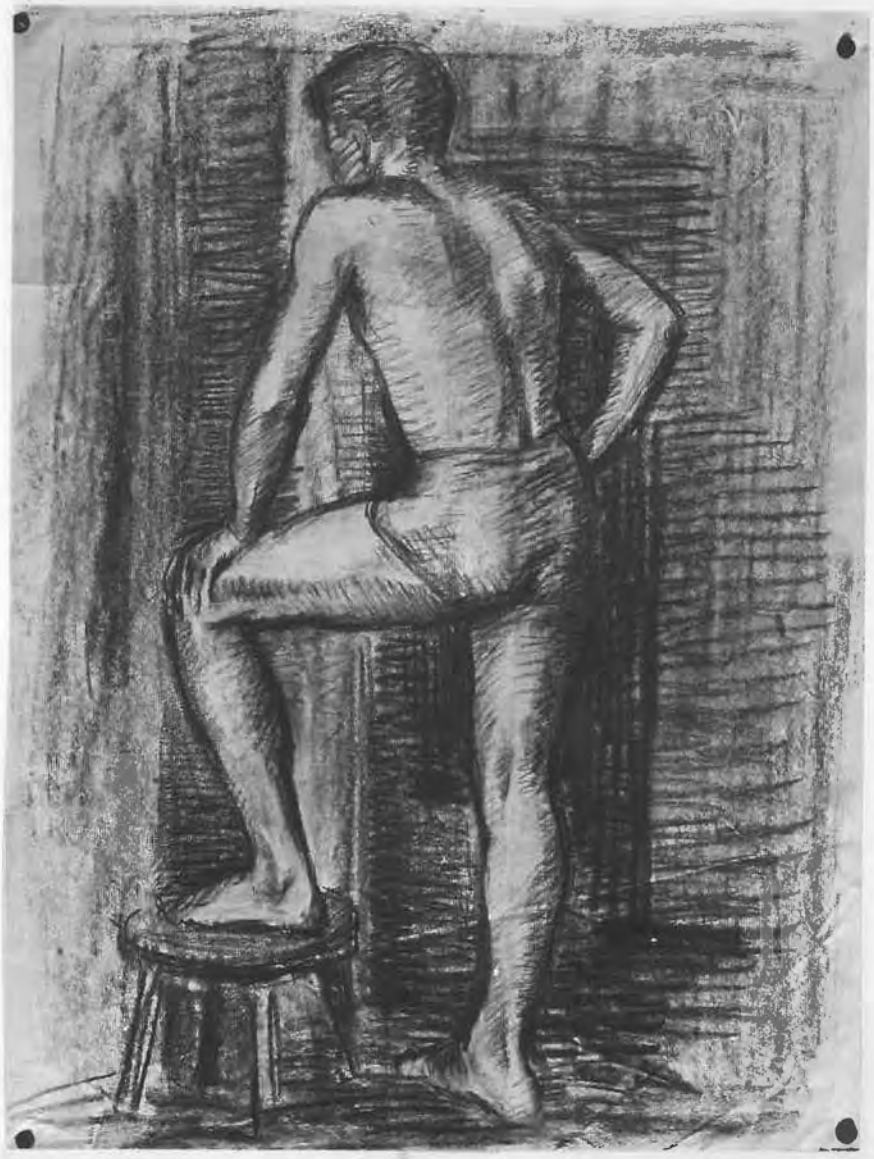
Fig. 3, Photograph taken February 15th.

The Virgin of Chancellor Rolin
1432

Jan Van Eyck
Flemish

The Journey of the Magi
1459-63

Benozzo Gozzoli
Italian



Life sketch for Prince

Life Sketch for Librarian

Life sketch for Cinderella

Fig. 1, Photograph taken February 28th.

Fig. 2, Photograph taken March 22nd.

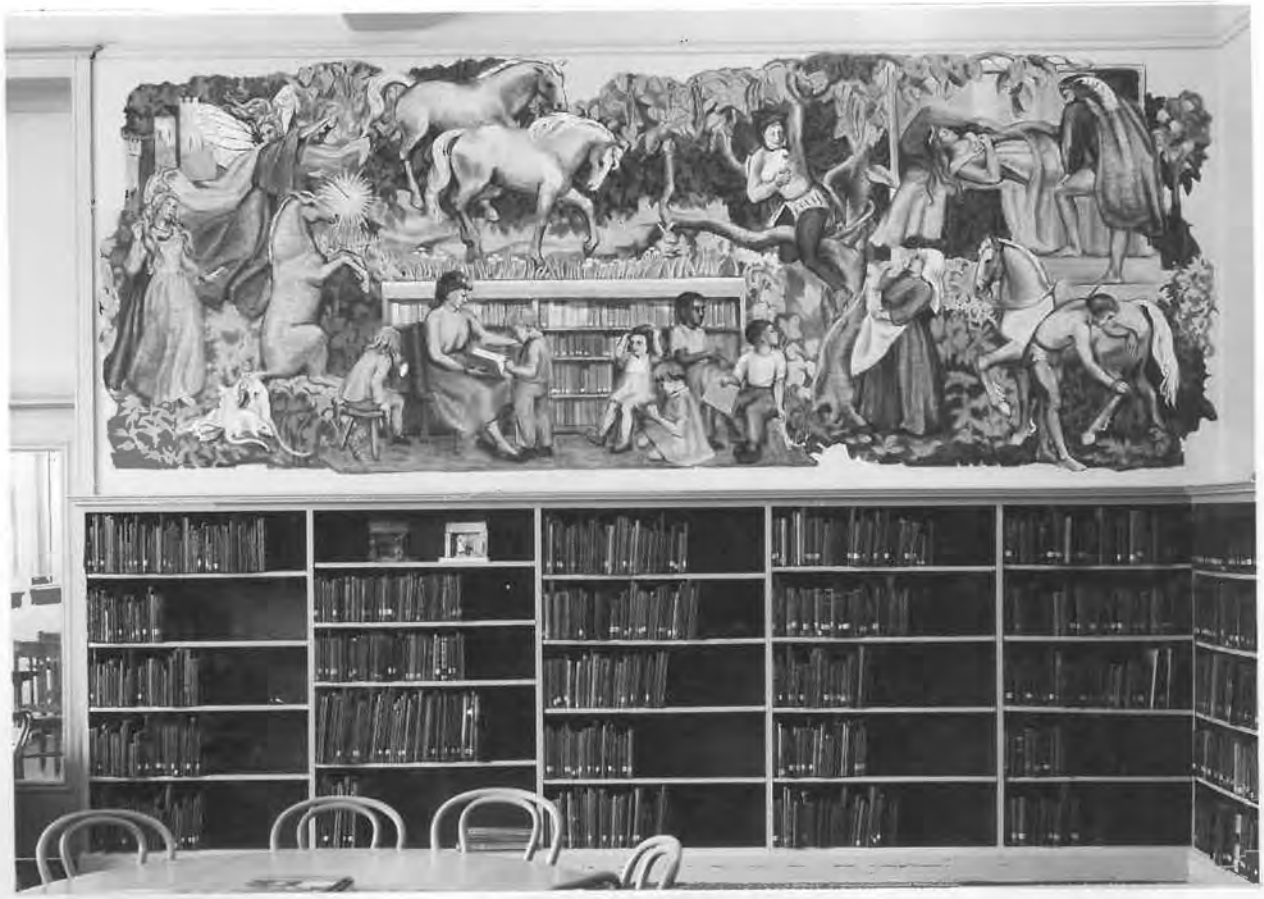


Fig. 3, Photograph taken April 12th.

Mille-fleur Tapestry
c. 1500

French

Last Judgment, Sistine Chapel, Det. Michelangelo
1534-1541 Italian

Final Photograph